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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/530,358	04/06/2005	Takenobu Sunagawa	Q86665	7769
23373	7590	11/03/2005	EXAMINER	
SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			IP, SIKYIN	
			ART UNIT	PAPER NUMBER
			1742	

DATE MAILED: 11/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/530,358

Applicant(s)

SUNAGAWA ET AL.

Examiner

Michael Bernshteyn

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. ____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 04/06/05, 05/10/05
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Mori et al. (U.S. Patent Application Publication US 2002/0091196).

With regard to the limitations of claims 1 and 2, Mori discloses a polymer resin composition, which comprises: (A) 100 parts by weight of **polyester resin**; (B) 1 to 50 parts by weight of at least one copolymer selected from the group consisting of an ethylene-olefin copolymer and ethylene-olefin-polyene compound copolymer, and (C) 1 to 16 parts by weight of an **epoxy group-containing ethylene copolymer** (abstract). Examples of the polyester resin used as the component (A) are condensation polymerization products between a diol and a dicarboxylic acid such as **polyethylene terephthalate resin, polypropylene terephthalate resin, polybutylene terephthalate resin**, etc. A mixture comprising two or more polyester resins mentioned above may be used (page 1, [0014] and [0017]). A polyester resin comprising a **recycled polyester resin** is preferred (page 1, [0019]).

Mori discloses that **the epoxy group-containing ethylene copolymer** used as the component (C) is a copolymer comprising an ethylene unit and an epoxy group-

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containing compound unit. The copolymer may additionally comprise an ethylenically unsaturated ester compound unit. Providing the sum of units in the copolymer is assigned to be 100% by weight, content of the ethylene unit in the copolymer is usually approximately from 20 to 99% by weight, that of the epoxy group-containing compound unit is usually approximately from 1 to 30% by weight, and that of the ethylenically unsaturated ester compound unit is usually approximately from 0 to 50% by weight (page 3, [0030]). Among epoxy group-containing compounds preferred are unsaturated carboxylic acid glycidyl esters and unsaturated carboxylic acid glycidyl ethers: **glycidyl acrylate, glycidyl methacrylate**, allyl glycidyl ether, styrene-glycidyl ether, etc. Specific examples of used saturated carboxylic acid vinyl esters are vinyl acetate, vinyl propionate and vinyl butylate and unsaturated carboxylic acid alkyl esters, such as methyl acrylate, ethyl acrylate, butyl acrylate, methyl methacrylate, ethyl methacrylate and butyl methacrylate. Of these, preferred are **vinyl acetate, methyl acrylate, ethyl acrylate and methyl methacrylate** (page 3, [0033] – [0034]).

Mori discloses that a number average molecular weight of the epoxy group-containing ethylene-copolymer measured by gel permeation chromatography is preferably approximately from **10,000 to 100,000**, from a viewpoint of mechanical properties such as Izod impact strength and molding processability of the polyester resin composition obtained (page 3, [0037]).

2. With regard to the limitations of claims 3 and 4, Mori discloses that the polyester resin composition can be obtained, for example, by different processes, such as:

(1) process comprising dry-blending all components , and then melt-kneading the obtained blend using an apparatus such as a single or twin screw extruder, Danbury mixer, a roll and a kneader.

(2) process comprising supplying directly respective components to an extruder of an injection-molding machine, and then melt-kneading the obtained mixture. This process is advantageous from an economical point of view, because an injection-molded **article** can be obtained from the composition through the injection-molded machine, immediately after said melt-kneading.

(3) process comprising melt-kneading any component(s) of the components (A) to (C) with a thermoplastic resin, **pelletizing** the obtained blend, and successfully **melt-kneading the pellet** obtained with the remaining component(s) (page 3, [0043] – [0047]):

Respective components were dry-blended, thereafter, the blend obtained was supplied to a unidirectional twin-screw extruder having a diameter of 30 mm at a rate of 18 kg/hour to perform melt-kneading at 290⁰ C and under a screw rotating speed of 200 rpm, thereby obtaining a composition having a **pellet form**. The pellet obtained was dried in a dehumidification drier at 120⁰ C for 6 hours, then was molded at a molding temperature of 290⁰ C and at mold temperature of 50⁰ C using as injection molding machine to obtain a test piece. Compare Examples 1 to 3 and Comparative Examples 1 to 4 (page 4, [0050], [0051]) with the specification (page 9, line 8 through page 10, line 8, Examples 1-30 and Comparative Examples 1-23).

Therefore, the instant claims are obvious variants of claims of US Patent Application Publication US 2002/0091196, and one skilled in the art would not be able to practice the invention of the instant claims without infringing the invention of US Patent Application Publication US 2002/0091196.

Conclusion

Other references used but not cited in this office include U.S. Patents 6,617,417, 6,512,046, 6,576,717, 5,268,438, 5,310,799, 5,352,500, 5,596,049, 4,694,049, 4,795,771, 4,999,388, US Patent Application Publications 2002/0091196, 2004/0010073, JP 62149748 and JP 62187756 are shown on the Notice of References Cited Form (PTO-892).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Bernshteyn whose telephone number is 571-272-2411. The examiner can normally be reached on M-F 8-5:30.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on 571-272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Michael Bernshteyn
Patent Examiner
Art Unit 1713

MB
10/25/2005



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